



**High-speed spindles for automatic tool changer**  
*Mandrini ad alta velocità per cambio utensile*

**TURBOFLEX**

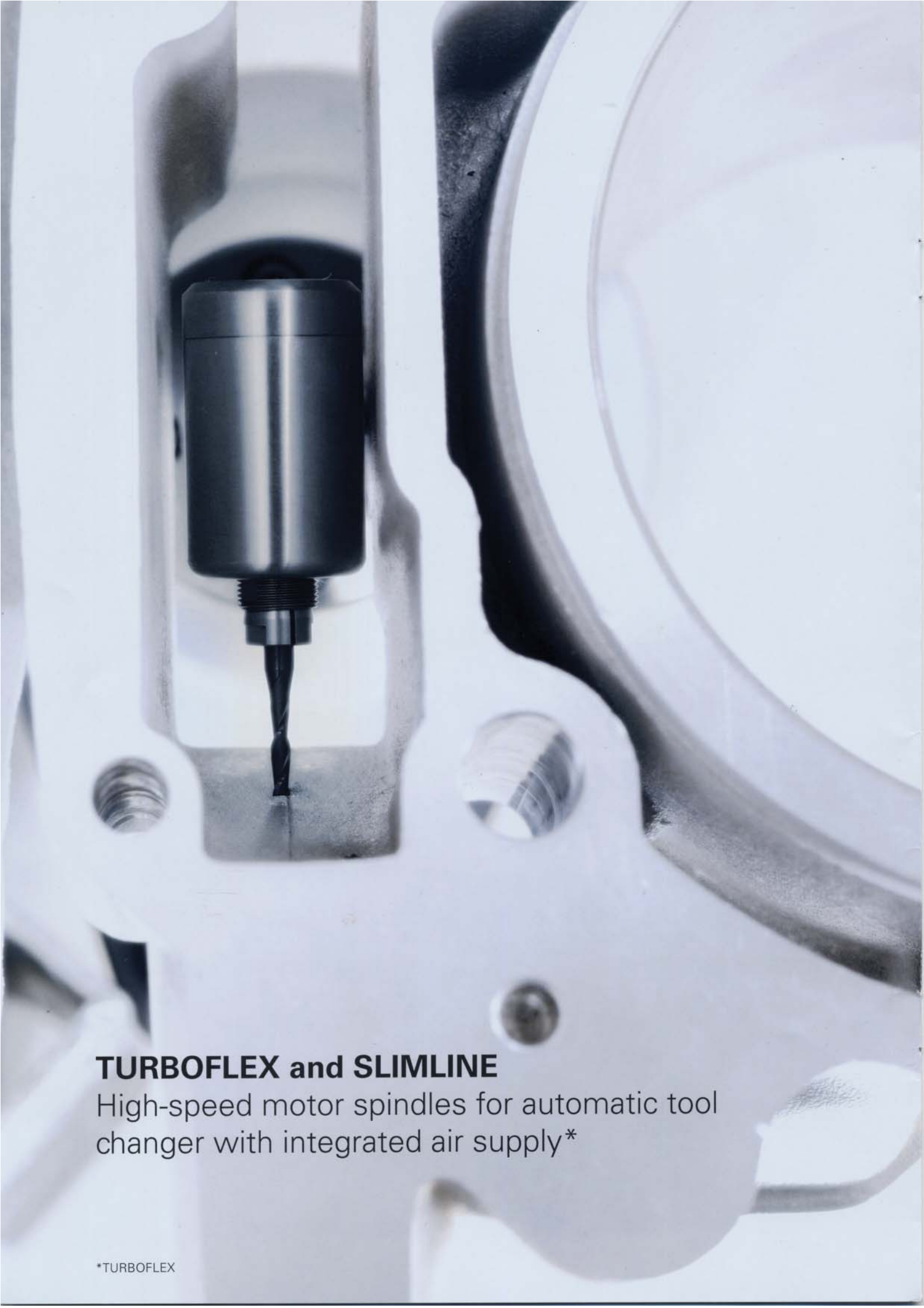
air driven



**SLIMLINE**

spindle driven





## **TURBOFLEX and SLIMLINE**

High-speed motor spindles for automatic tool changer with integrated air supply\*

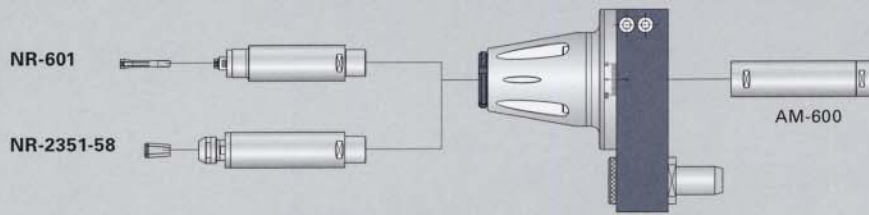
\*TURBOFLEX

**TURBOFLEX**

air driven

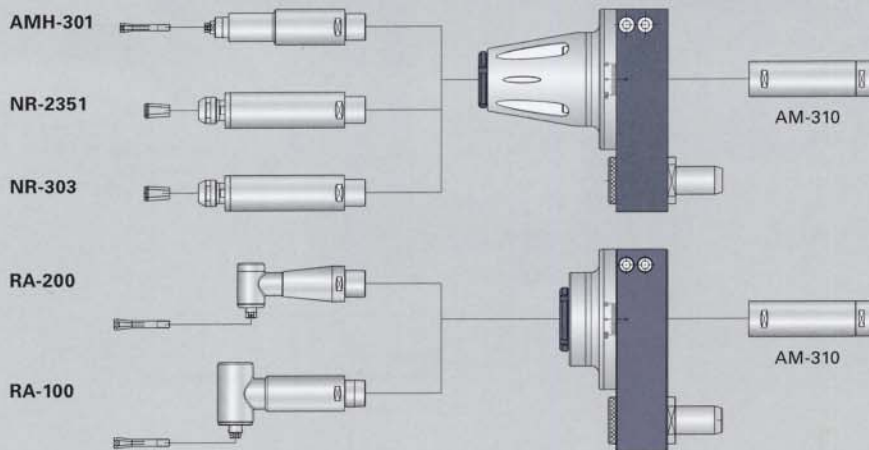
High-speed spindles up to 58.000 min<sup>-1</sup>

p. 4-5 / S. 4-5



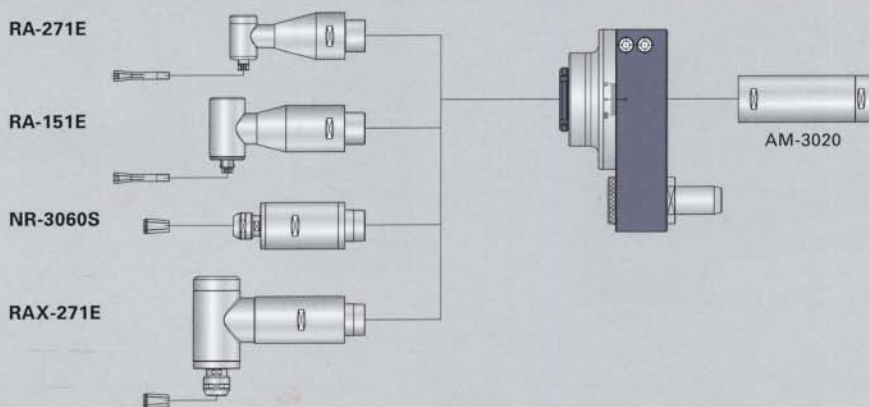
High-speed spindles up to 30.000 min<sup>-1</sup>

p. 6-9 / S. 6-9



High-speed spindles up to 18.000 min<sup>-1</sup>

p. 10-13 / S. 10-13

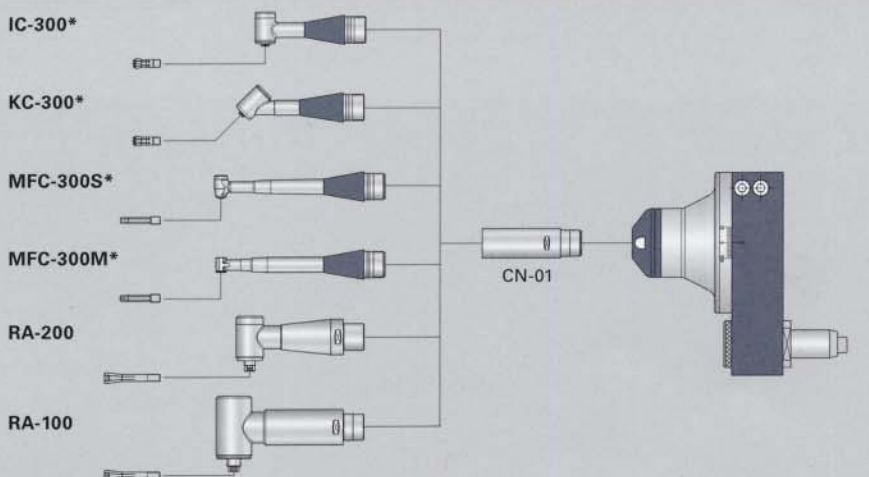


**SLIMLINE**

spindle driven

High-speed spindles up to 20.000 min<sup>-1</sup>

p. 14-19 / S. 14-19



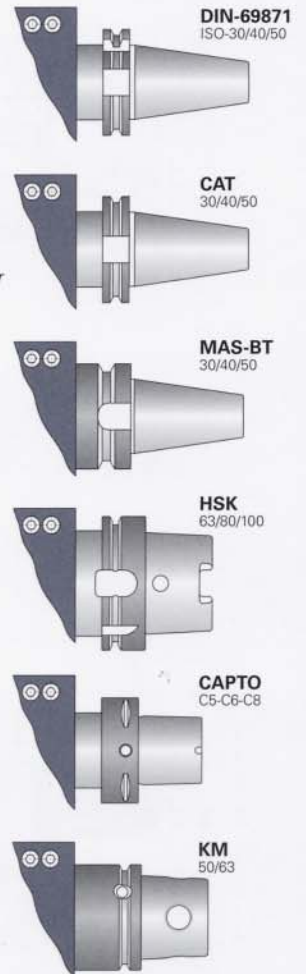
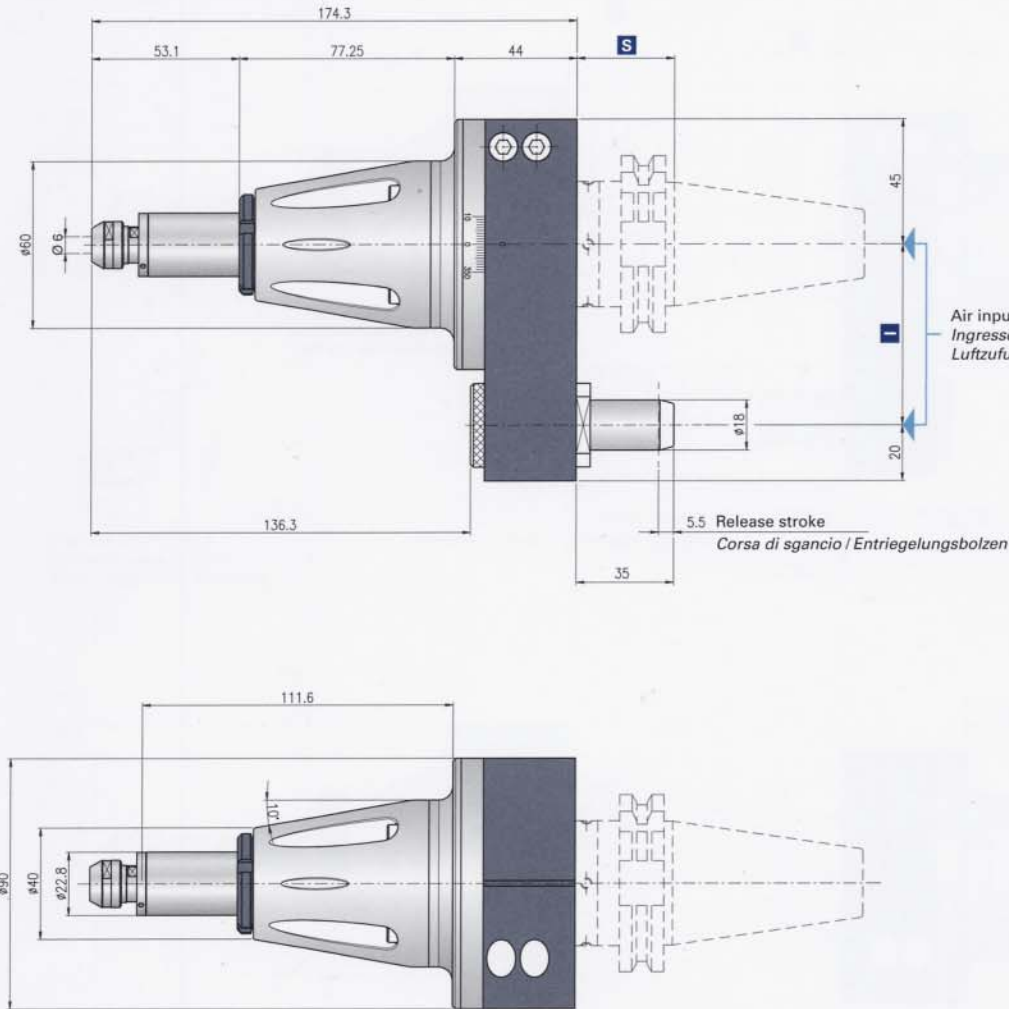
\*For special applications only / solo per applicazioni speciali / nur für Sonderanwendungen



# TURBOFLEX NR-2351

with ceramic bearings / con cuscinetti ceramici / mit Keramikkugellager

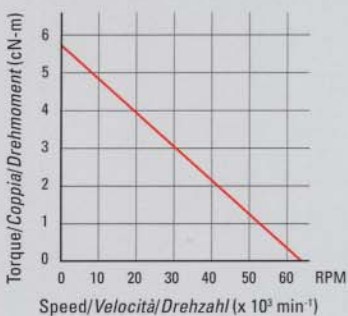
Non interchangeable input drive shank  
Coni non intercambiabili  
Nicht wechselbare Aufnahme



Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

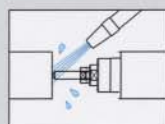
\*optional

Torque-Speed Chart AM-600  
Diagramma Coppia-Velocità AM-600  
Drehmoment-Drehzahl Diagramm AM-600



## Accessories / Accessori / Zubehör

	NR-601	NR-2351-58
Collet/Pinze/Spannzange	mm CHM: ø0,3, ø3 every 0,1 and ø2,35, ø3,175	CHK: ø0,5, ø6 every 0,1 and ø2,35, ø3,175, ø6,35
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18



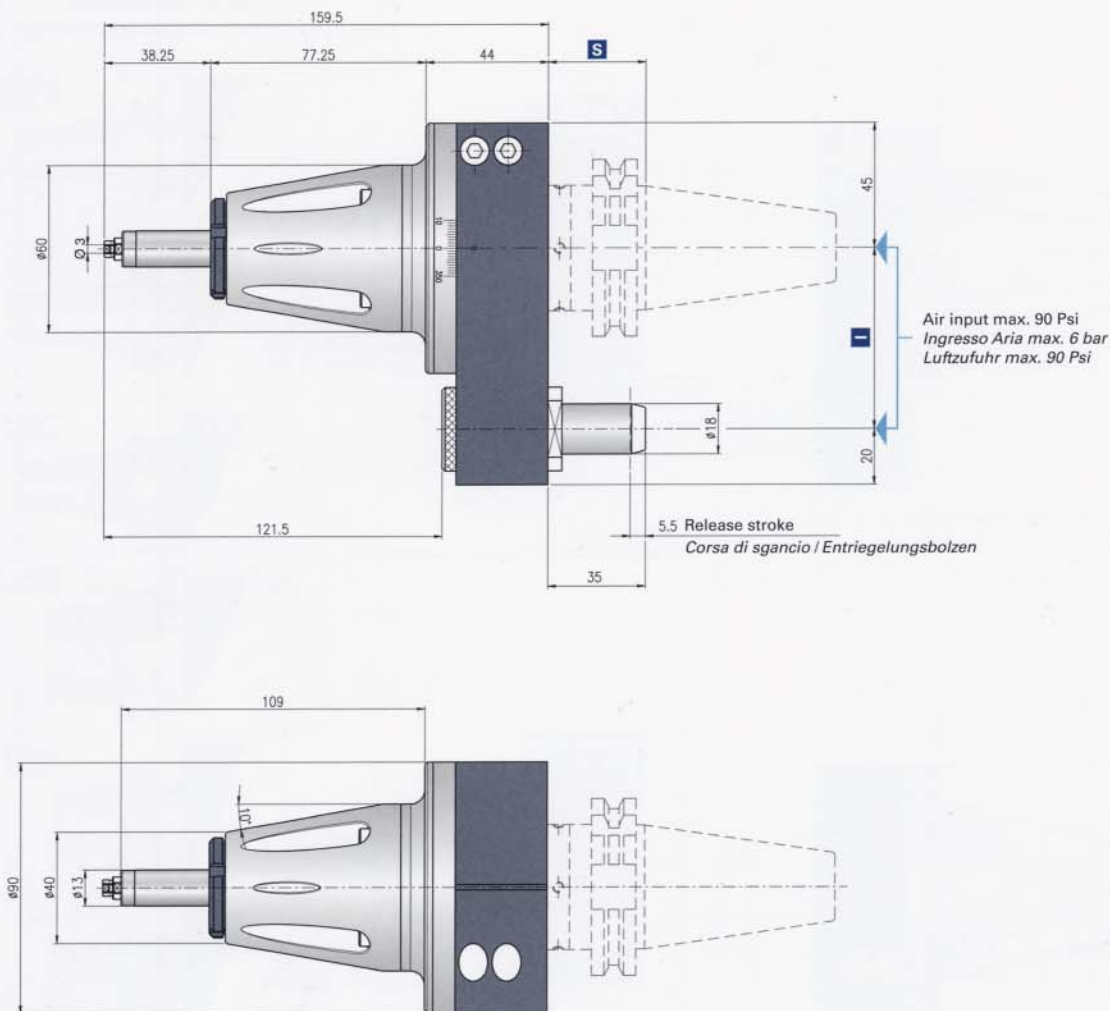
It is possible to use coolant during the machining.  
Consentito usare refrigerante durante la lavorazione.  
Kühlmitteleinsatz möglich.

## Precision Spindle/Precisione Mandrino/Spindelpräzision



**High-speed spindles up to 30.000 min<sup>-1</sup>**

**TURBOFLEX AMH-301**



<b>Technical Data / Dati Tecnici / Technische Daten</b>		<b>AMH-301</b>	<b>NR-2351</b>	<b>NR-303</b>
RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	30.000	30.000	30.000
Type motor / Motore tipo / Motortyp		AM-310	AM-310	AM-310
Collet / Pinze / Spannzange	mm	CHM Ø3	CHK Ø3	CHK Ø3
Power / Potenza / Leistung	W	108	108	108
Rotation / Rotazione / Rotation		AM-310 RA Dx-Right, AM-310 LA Sx-Left		
Air pressure / Pressione aria. / Luftdruck	bar	max. 6 (max. 90 Psi)	max. 6 (max. 90 Psi)	max. 6 (max. 90 Psi)
Air consumption / Consuma aria / Luftverbrauch	NI/min	226	226	226
Type Spindle / Manipolo tipo / Spindeltyp		AMH-301	NR-2351*	NR-303
Weight / Peso / Gewicht	kg	4	4	4

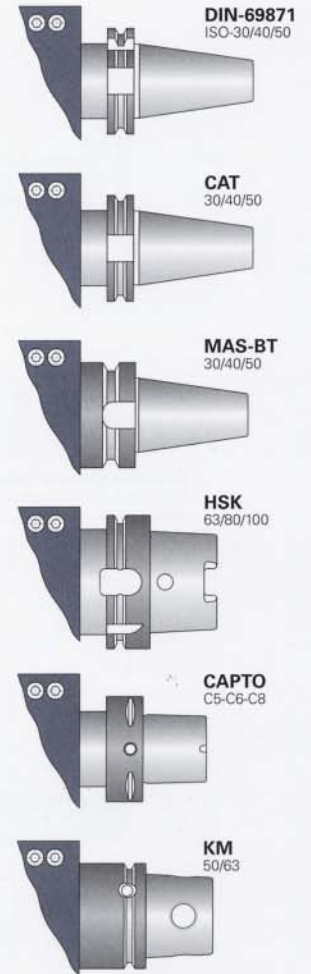
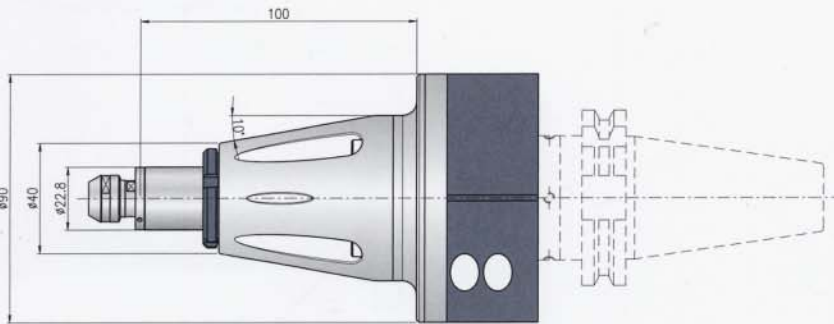
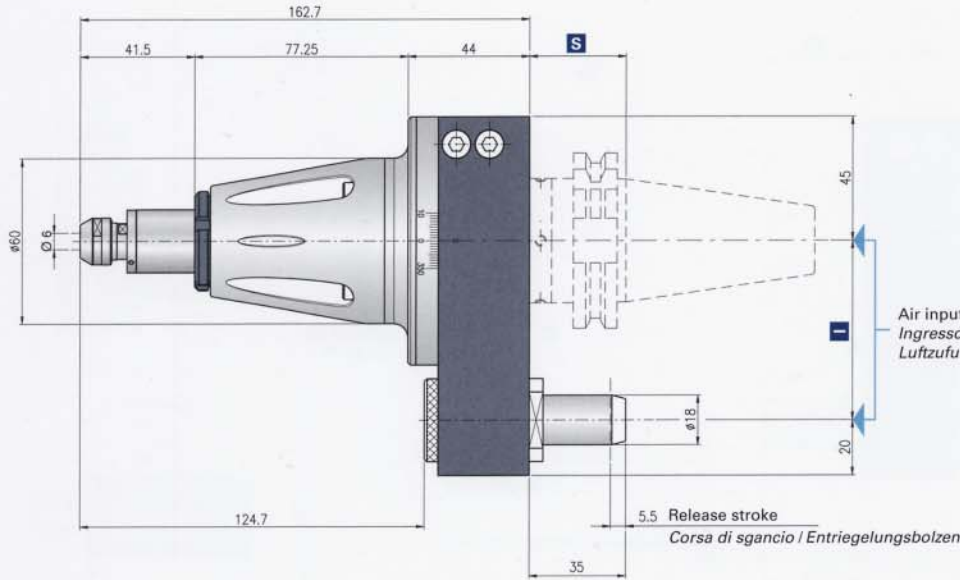
\* with ceramics bearings / cuscinetti in ceramica / mit Keramiklagern

STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book



# TURBOFLEX NR-2351 / NR-303

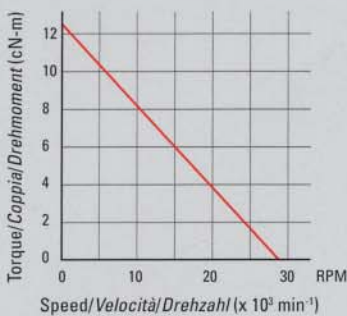
**Non interchangeable input drive shank**  
*Coni non intercambiabili*  
*Nicht wechselbare Aufnahme*



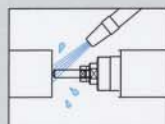
Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

\*optional

**Torque-Speed Chart AM-310**  
*Diagramma Coppia-Velocità AM-310*  
*Drehmoment-Drehzahl Diagramm AM-310*



Accessories / Accessori / Zubehör	AMH-301	NR-2351, NR-303
Collet/Pinze/Spannzange	mm CHM: ø0,3, ø3 every 0,1 and ø2,35, ø3,175	CHK: ø0,5, ø6 every 0,1 ø2,35, ø3,175, ø6,35
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18



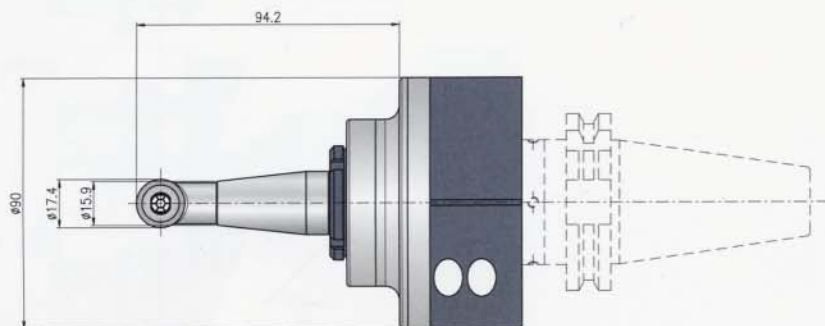
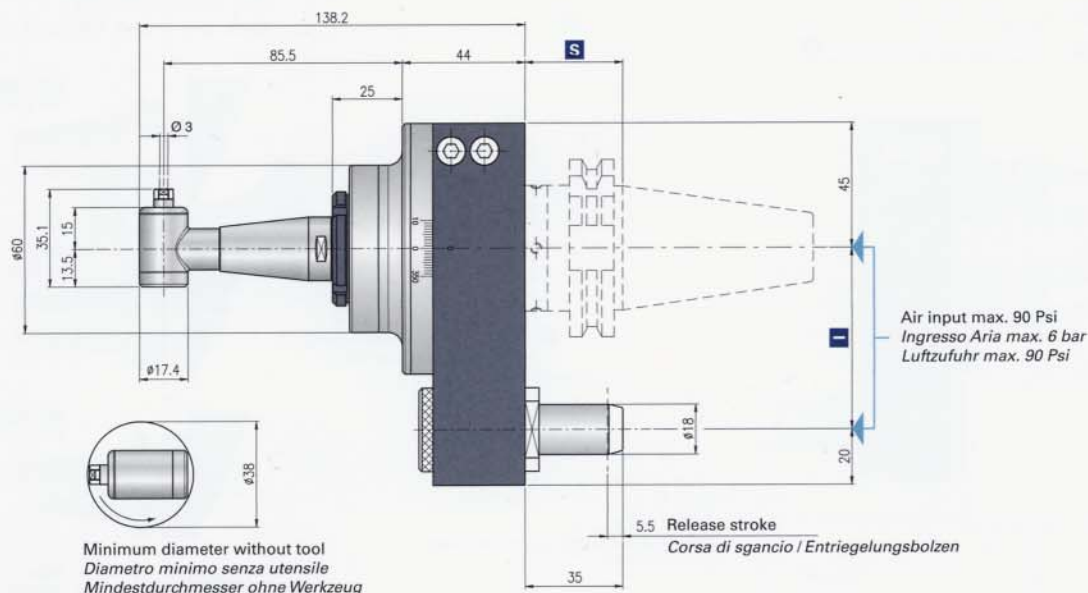
It is possible to use coolant during the machining.  
*Consentito usare refrigerante durante la lavorazione.*  
*Kühlmitteleinsatz möglich.*

Precision Spindle/Precisione Mandrino/Spindelpräzision



High-speed spindles up to 30.000 min<sup>-1</sup>

TURBOFLEX RA-200



Technical Data / Dati Tecnici / Technische Daten		RA-200	RA-100
Input RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	30.000	30.000
Type motor / Motore tipo / Motortyp		AM-310	AM-310
Collet / Pinze / Spannzange	mm	CHS Ø3	CH8 Ø3
Power / Potenza / Leistung	W	108	108
Rotation / Rotazione / Rotation		AM-310 RA Dx-Right, AM-310 LA Sx-Left	AM-310 RA Dx-Right, AM-310 LA Sx-Left
Air pressure / Pressione aria. / Luftdruck	bar	max. 6 (max. 90 Psi)	max. 6 (max. 90 Psi)
Air consumption / Consuma aria / Luftverbrauch	NI/min	226	226
Type Spindle / Manipolo tipo / Spindeltyp		AMH-301	AMH-301
Output RPM / N° Giri in uscita / Drehzahlausgang	min <sup>-1</sup>	20.000	11.230
Rt. reduction / Rt. in riduzione / Rt. Reduktion		1/1,5	1/2,67
Weight / Peso / Gewicht	kg	4	4

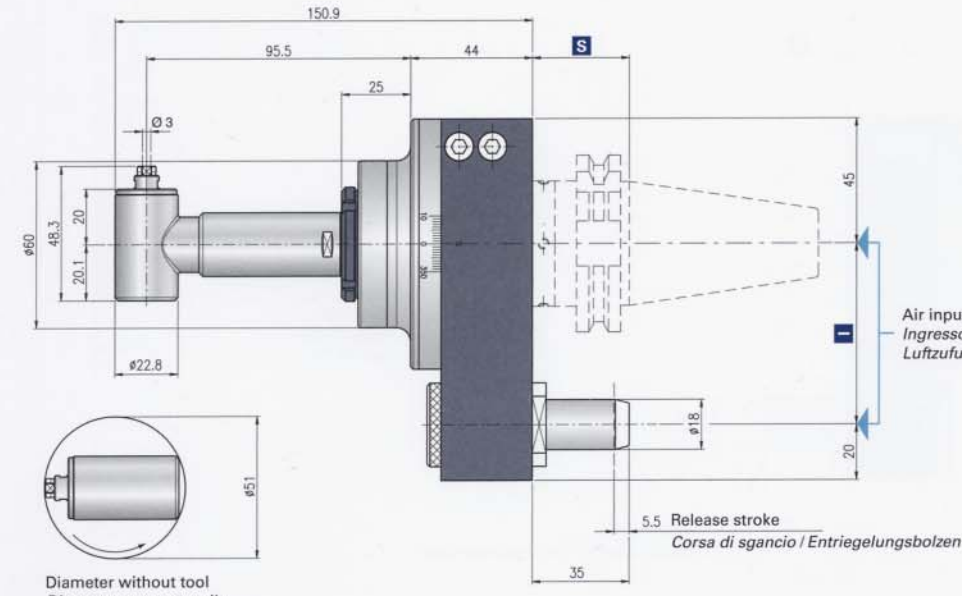
STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book





# TURBOFLEX RA-100

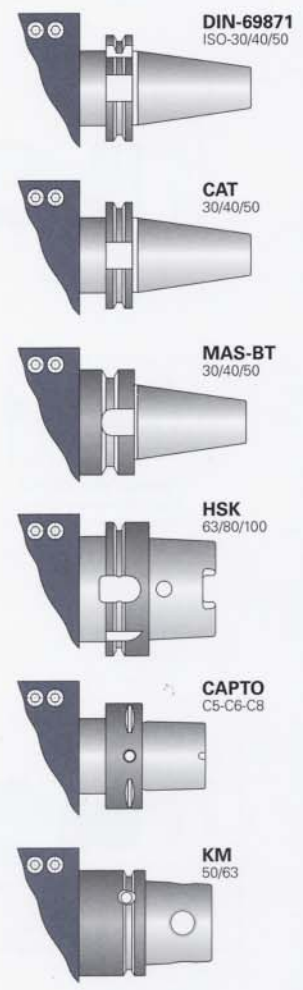
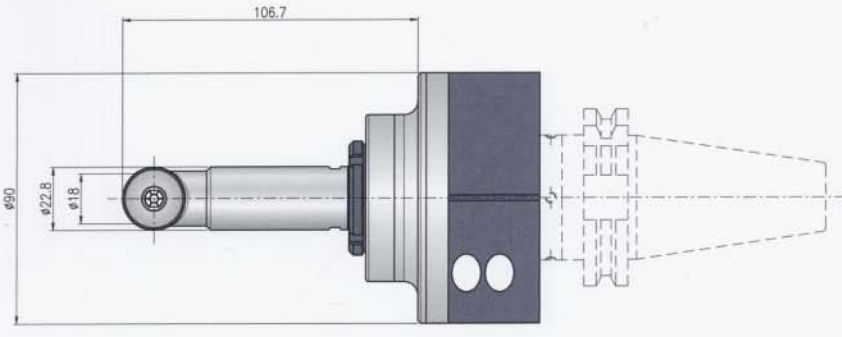
**Non interchangeable input drive shank**  
*Coni non intercambiabili*  
*Nicht wechselbare Aufnahme*



Air input max. 90 Psi  
*Ingresso Aria max. 6 bar*  
*Luftzufuhr max. 90 Psi*

5.5 Release stroke  
*Corsa di sgancio / Entriegelungsbolzen*

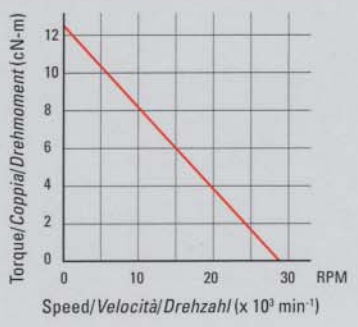
Diameter without tool  
*Diametro senza utensile*  
*Durchmesser ohne Werkzeug*



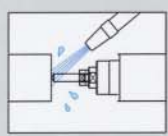
Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

\*optional

**Torque-Speed Chart AM-310**  
*Diagramma Coppia-Velocità AM-310*  
*Drehmoment-Drehzahl Diagramm AM-310*



Accessories / Accessori / Zubehör	RA-200	RA-100
Collet/Pinze/Spannzange	mm CHS: ø0,8, ø3 every 0,1 and ø2,35, ø3,175	CH8: ø0,8, ø3 every 0,1 and ø2,35, ø3,175
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18

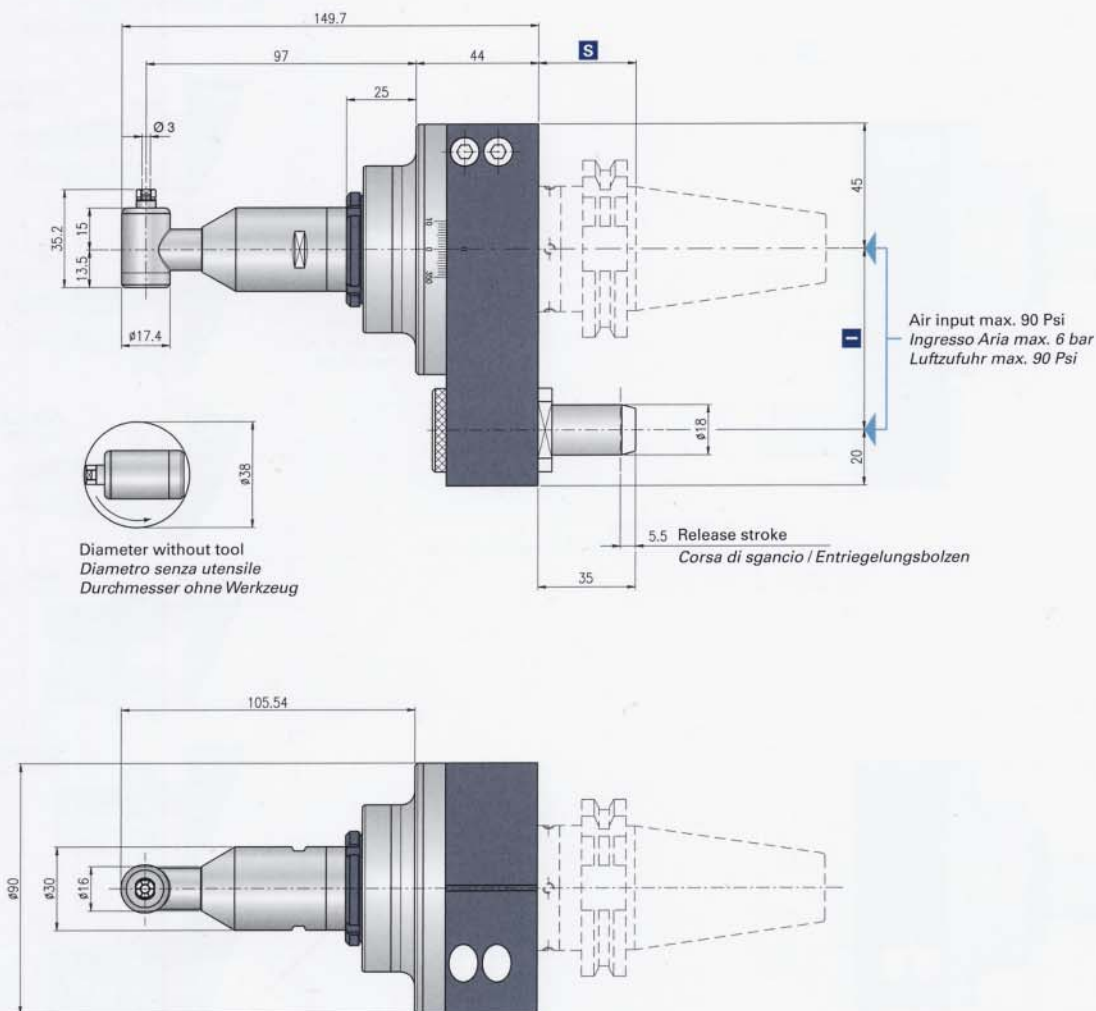


It is possible to use coolant during the machining.  
*Consentito usare refrigerante durante la lavorazione.*  
*Kühlmitteleinsatz möglich.*



High-speed spindles up to 18.000 min<sup>-1</sup>

## TURBOFLEX RA-271E



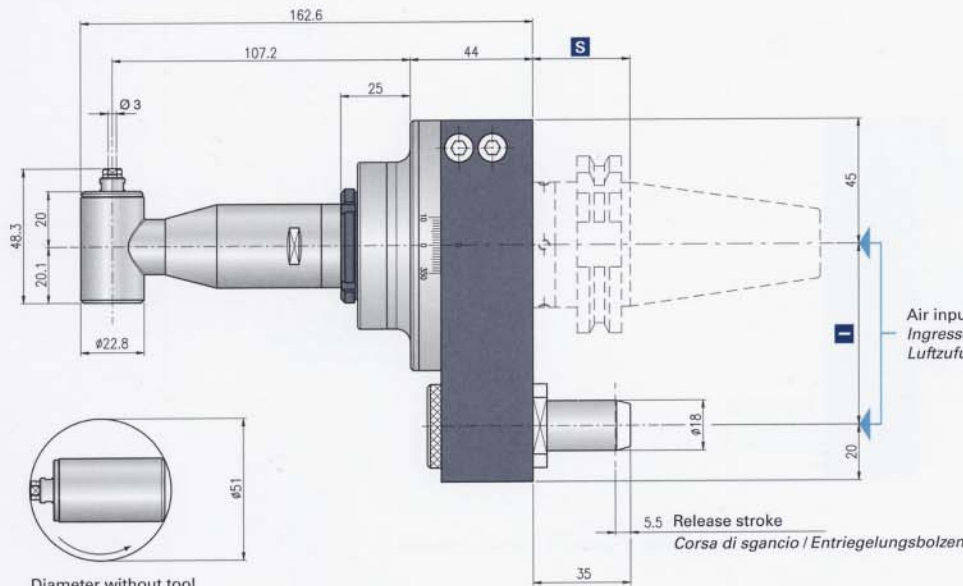
Technical Data / Dati Tecnici / Technische Daten		RA-271E	RA-151E
Input RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	18.000	18.000
Type motor / Motore tipo / Motortyp		AM-3020	AM-3020
Collet / Pinze / Spannange	mm	CHS $\varnothing 3$	CH8 $\varnothing 3$
Power / Potenza / Leistung	W	125	125
Rotation / Rotazione / Rotation		AM-3020 RA Dx-Right, AM-3020 LA Sx-Left	AM-3020 RA Dx-Right, AM-3020 LA Sx-Left
Air pressure / Pressione aria. / Luftdruck	bar	max. 6 (max. 90 Psi)	max. 6 (max. 90 Psi)
Air consumption / Consuma aria / Luftverbrauch	NI/min	178	178
Type Spindle / Manipolo tipo / Spindeltyp		RA-271E	RA-151E
Output RPM / N° Giri in uscita / Drehzahlausgang	min <sup>-1</sup>	12.000	6.740
Rt. reduction / Rt. in riduzione / Rt. Reduktion		1/1,5	1/2,67
Weight / Peso / Gewicht	kg	4	4

STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book

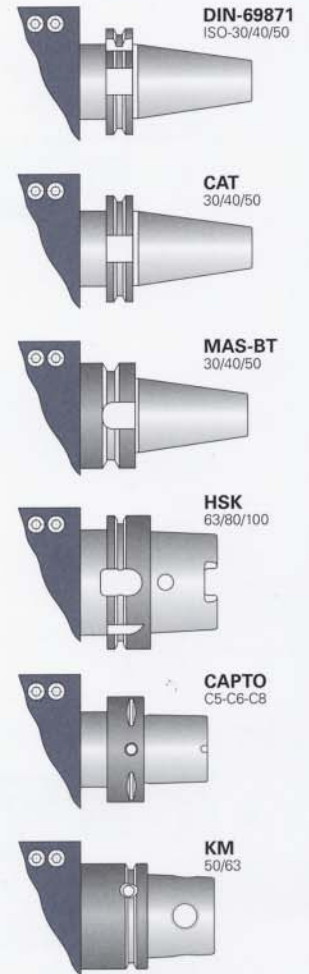
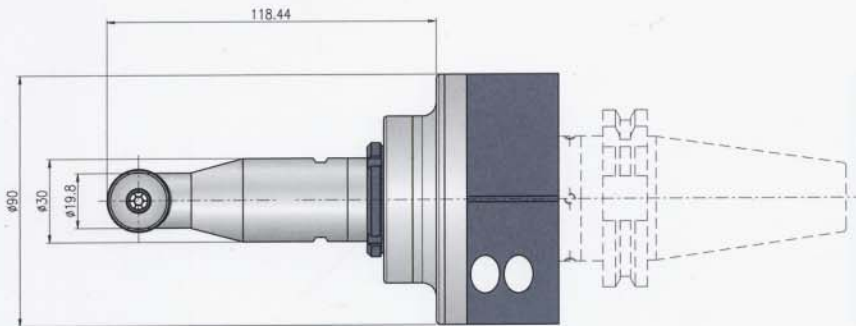


# TURBOFLEX RA-151E

**Non interchangeable input drive shank**  
*Coni non intercambiabili*  
*Nicht wechselbare Aufnahme*



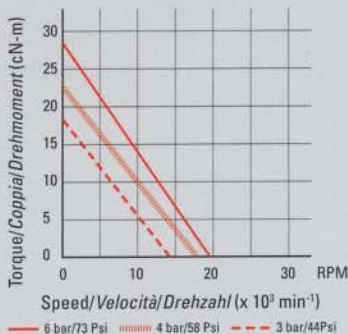
Diameter without tool  
*Diametro senza utensile*  
*Durchmesser ohne Werkzeug*



Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

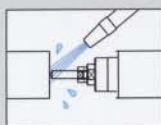
\*optional

**Torque-Speed Chart AM-3020**  
*Diagramma Coppia-Velocità AM-3020*  
*Drehmoment-Drehzahl Diagramm AM-3020*



### Accessories / Accessori / Zubehör

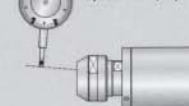
	RA-271E	RA-151E
Collet/Pinze/Spannzange	mm CHS: ø0,8, ø3 every 0,1 and ø2,35, ø3,175	CH8: ø0,8, ø3 every 0,1 and ø2,35, ø3,175
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18



It is possible to use coolant during the machining.  
*Consentito usare refrigerante durante la lavorazione.*  
*Kühlmitteleinsatz möglich.*

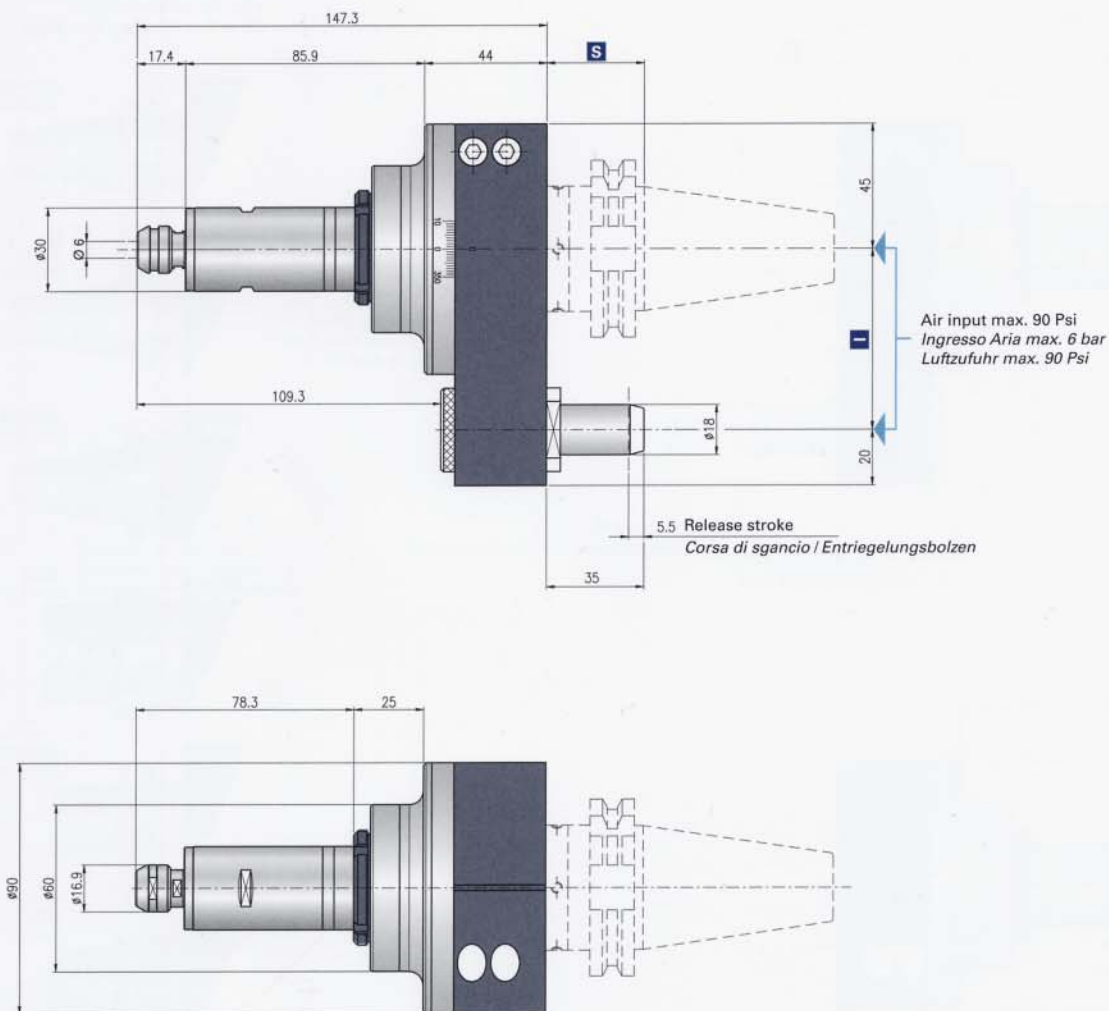
### Precision Spindle/Precisione Mandrino/Spindelpräzision

0,002 mm / 0,00008 inch.



High-speed spindles up to 18.000 min<sup>-1</sup>

## TURBOFLEX NR-3060S

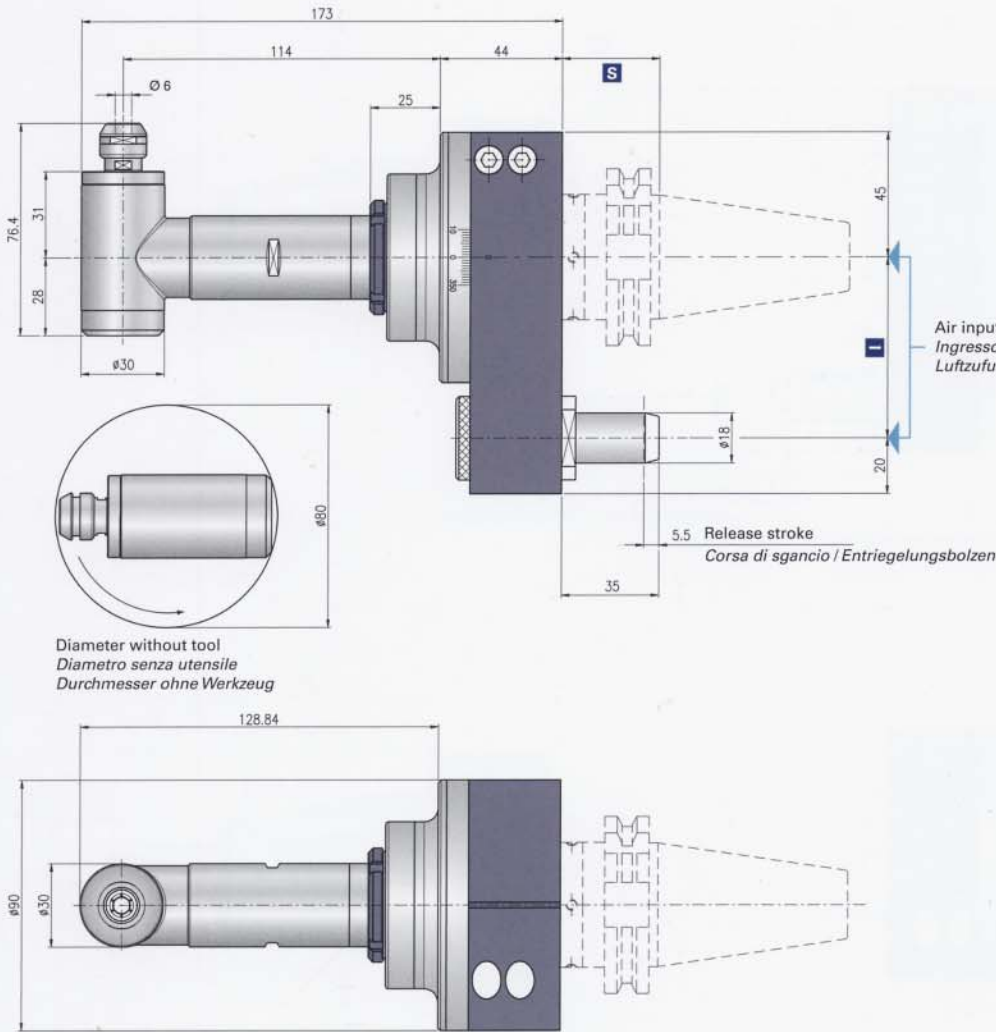


Technical Data / Dati Tecnici / Technische Daten		NR-3060S	RAX-271E
Input RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	18.000	18.000
Type motor / Motore tipo / Motortyp		AM-3020	AM-3020
Collet / Pinze / Spannzange	mm	CHK Ø6	CHK Ø6
Power / Potenza / Leistung	W	125	125
Rotation / Rotazione / Rotation		AM-3020 RA Dx-Right, AM-3020 LA Sx-Left	AM-3020 RA Dx-Right, AM-3020 LA Sx-Left
Air pressure / Pressione aria. / Luftdruck	bar	max. 6 (max. 90 Psi)	max. 6 (max. 90 Psi)
Air consumption / Consuma aria / Luftverbrauch	NI/min	178	178
Type Spindle / Manipolo tipo / Spindeltyp		NR-3060S	RAX-271E
Output RPM / N° Giri in uscita / Drehzahlausgang	min <sup>-1</sup>	-	12.000
Rt. reduction / Rt. in riduzione / Rt. Reduktion		-	1/1,5
Weight / Peso / Gewicht	kg	4	4

STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book

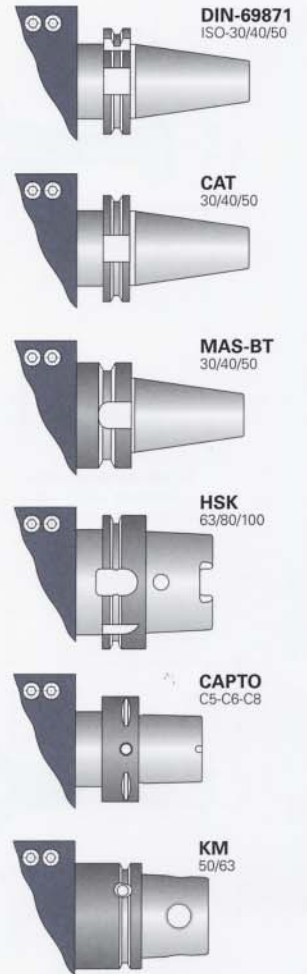


# TURBOFLEX RAX-271E



Diameter without tool  
Diametro senza utensile  
Durchmesser ohne Werkzeug

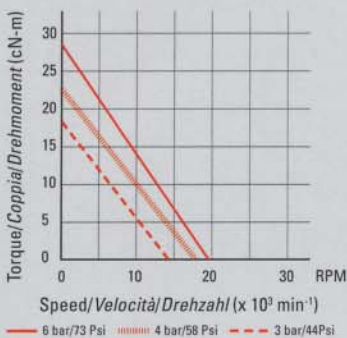
**Non interchangeable input drive shank**  
Coni non intercambiabili  
Nicht wechselbare Aufnahme



Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

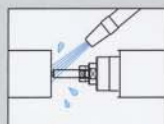
\*optional

**Torque-Speed Chart AM-3020**  
Diagramma Coppia-Velocità AM-3020  
Drehmoment-Drehzahl Diagramm AM-3020



### Accessories / Accessori / Zubehör

	NR-3060S	RAX-271E
Collet/Pinze/Spannzange	mm CHK: ø0,5, ø6 every 0,1 and ø2,35, ø3,175, ø6,35	CHK: ø0,5, ø6 every 0,1 and ø2,35, ø3,175, ø6,35
Air line kit/Filtro regolatore aria/Luftsystm	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18



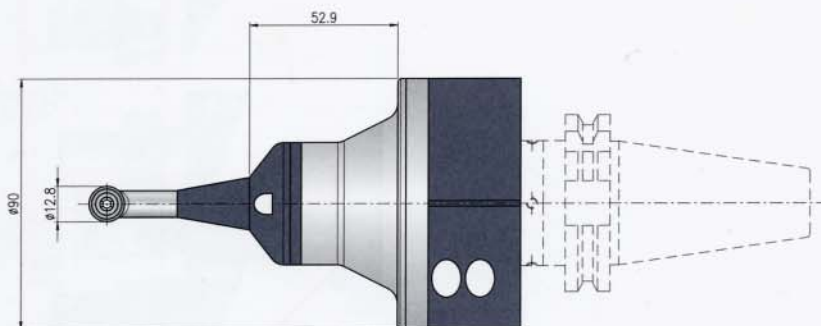
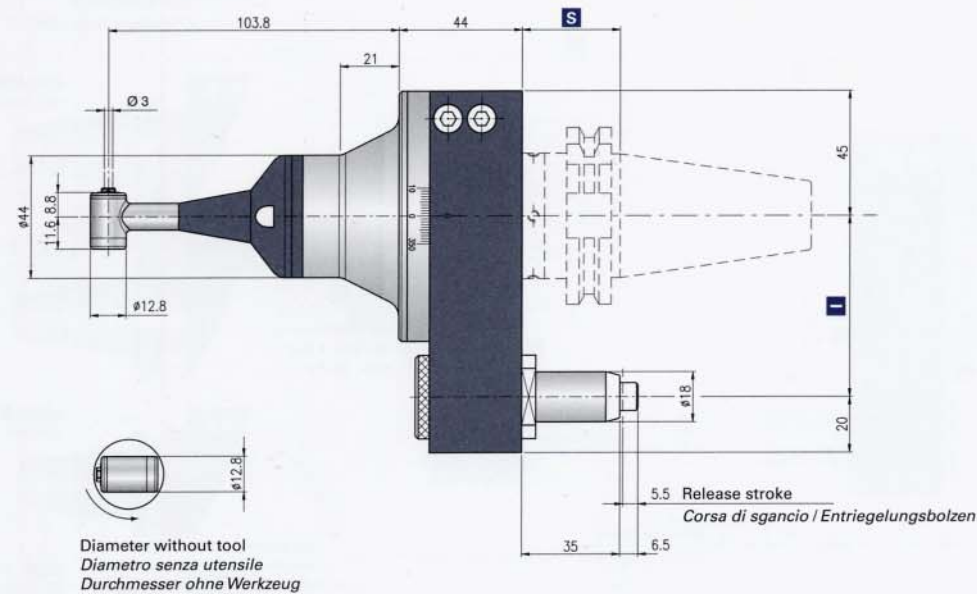
It is possible to use coolant during the machining.  
Consentito usare refrigerante durante la lavorazione.  
Kühlmitteleinsatz möglich.

### Precision Spindle/Precisione Mandrino/Spindelpräzision



High-speed spindles up to 20.000 min<sup>-1</sup>

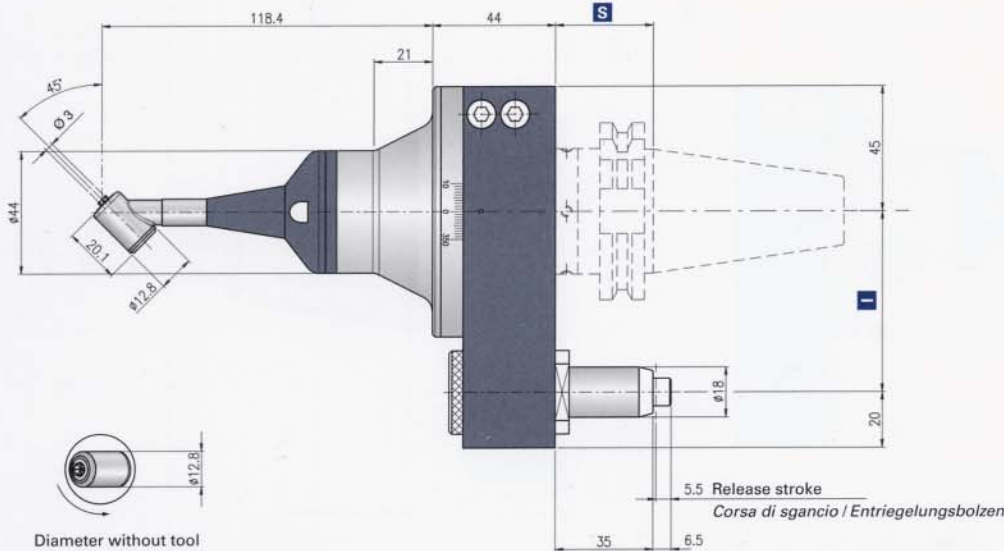
## SLIMLINE IC-300



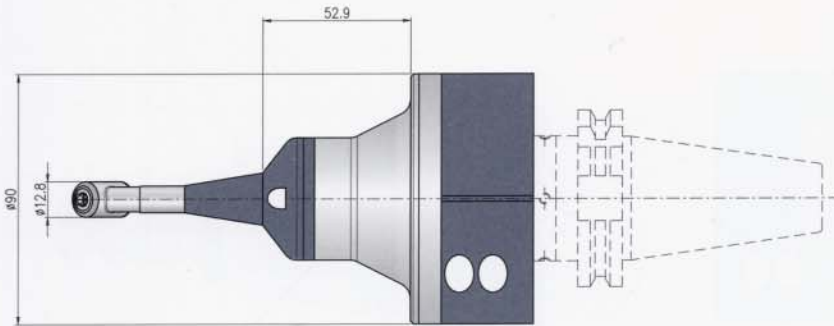
Technical Data / Dati Tecnici / Technische Daten		IC-300*	KC-300*
RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	20.000	20.000
Rt reduction / Rt riduzione / Rt Reduktion		3/4	3/4
Collet / Pinze / Spannzange	mm	CHC Ø3	CHC Ø3
Type Spindle / Manipolo tipo / Spindeltyp		IC-300	KC-300
Rotation / Rotazione / Rotation		right/destra/rechts, left/sinistra/links	right/destra/rechts, left/sinistra/links
Weight / Peso / Gewicht	kg	3	3

STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book

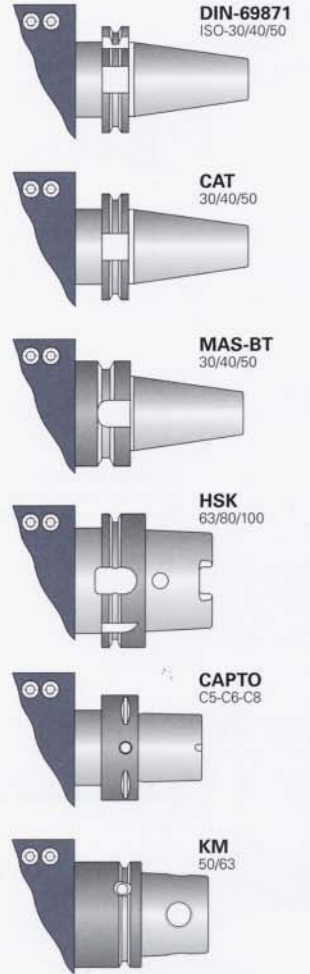
# SLIMLINE KC-300



Diameter without tool  
Diametro senza utensile  
Durchmesser ohne Werkzeug



Non interchangeable input drive shank  
Coni non intercambiabili  
Nicht wechselbare Aufnahme



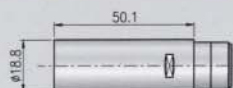
Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

\*optional

## Accessories / Accessori / Zubehör

	IC-300	KC-300
Collet/Pinze/Spannzange	CHC: ø0,1, ø3 every 0,1 and ø2,35, ø3,175	CHC: ø0,1, ø3 every 0,1 and ø2,35, ø3,175
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18
Extension/Prolunga/Verlängerung	CN-01	CN-01

Extension between spindle and head  
Prolunga da inserire tra manopolo e mini testa  
Verlängerung zwischen Spindel und Fräskopf

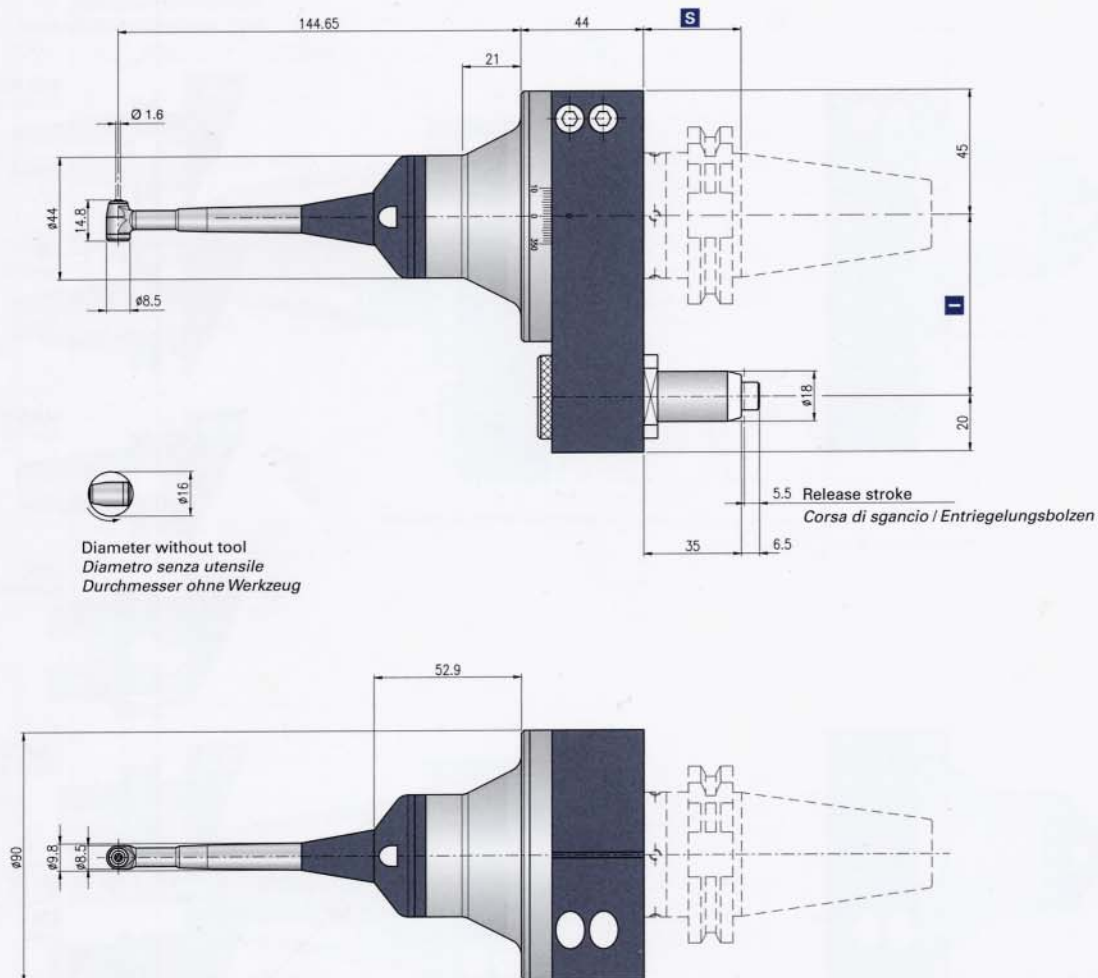


Precision Spindle/Precisione Mandrina/Spindelpräzision



High-speed spindles up to 15.000 min<sup>-1</sup>

## SLIMLINE MFC-300S

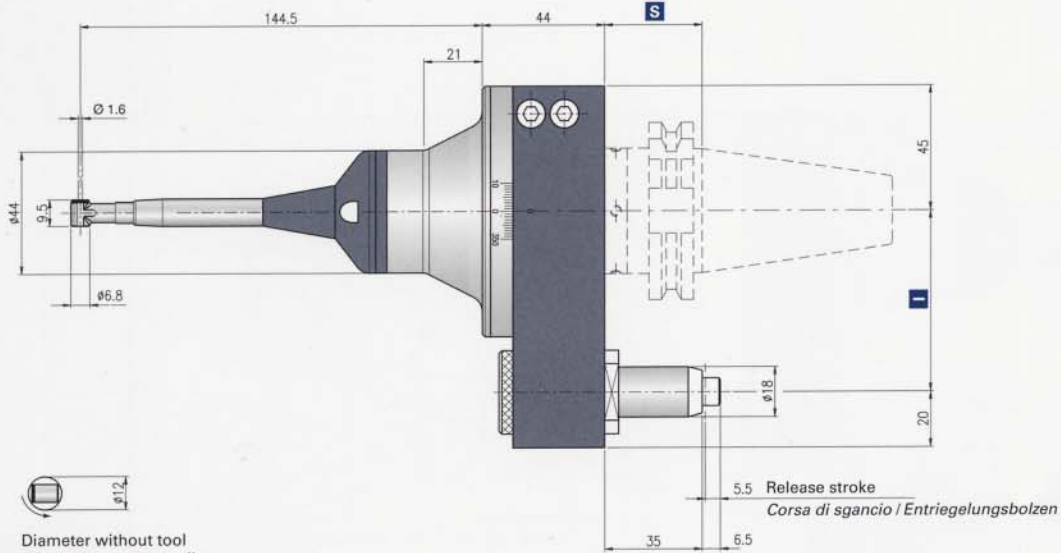


Technical Data / Dati Tecnici / Technische Daten		MFC-300S*	MFC-300M*
RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	15.000	15.000
Rt reduction / Rt riduzione / Rt Reduktion		1/1	1/1
Collet / Pinze / Spannzange	mm	K-252 Ø1,6	K-252 Ø1,6
Type Spindle / Manipolo tipo / Spindeltyp		MFC-300S	MFC-300M
Rotation / Rotazione / Rotation		right/destra/rechts, left/sinistra/links	right/destra/rechts, left/sinistra/links
Weight / Peso / Gewicht	kg	3	3

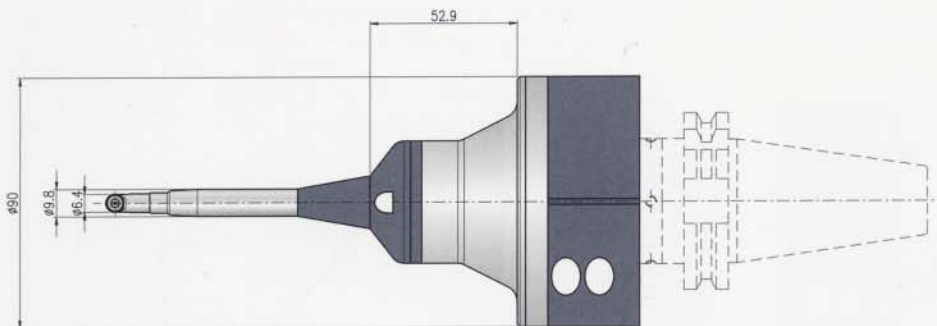
STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book



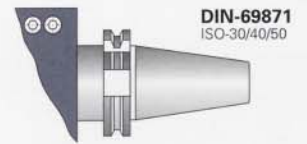
# SLIMLINE MFC-300M



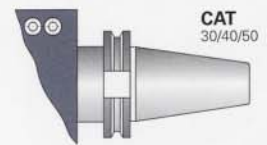
Diameter without tool  
 Diametro senza utensile  
 Durchmesser ohne Werkzeug



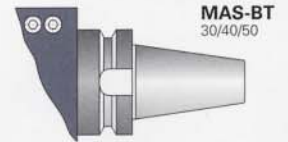
Non interchangeable input drive shank  
 Coni non intercambiabili  
 Nicht wechselbare Aufnahme



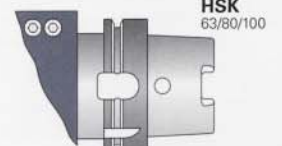
DIN-69871  
 ISO-30/40/50



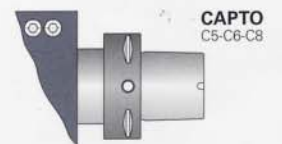
CAT  
 30/40/50



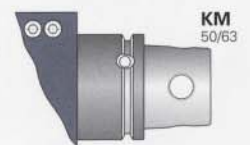
MAS-BT  
 30/40/50



HSK  
 63/80/100



CAPTO  
 C5-C6-C8



KM  
 50/63

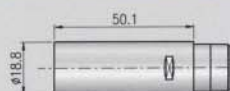
Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

\*optional

## Accessories / Accessori / Zubehör

	MFC-300S	MFC-300M
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18
Extension/Prolunga/Verlängerung	CN-01	CN-01

Extension between spindle and head  
 Prolunga da inserire tra manopolo e mini testa  
 Verlängerung zwischen Spindel und Fräskopf

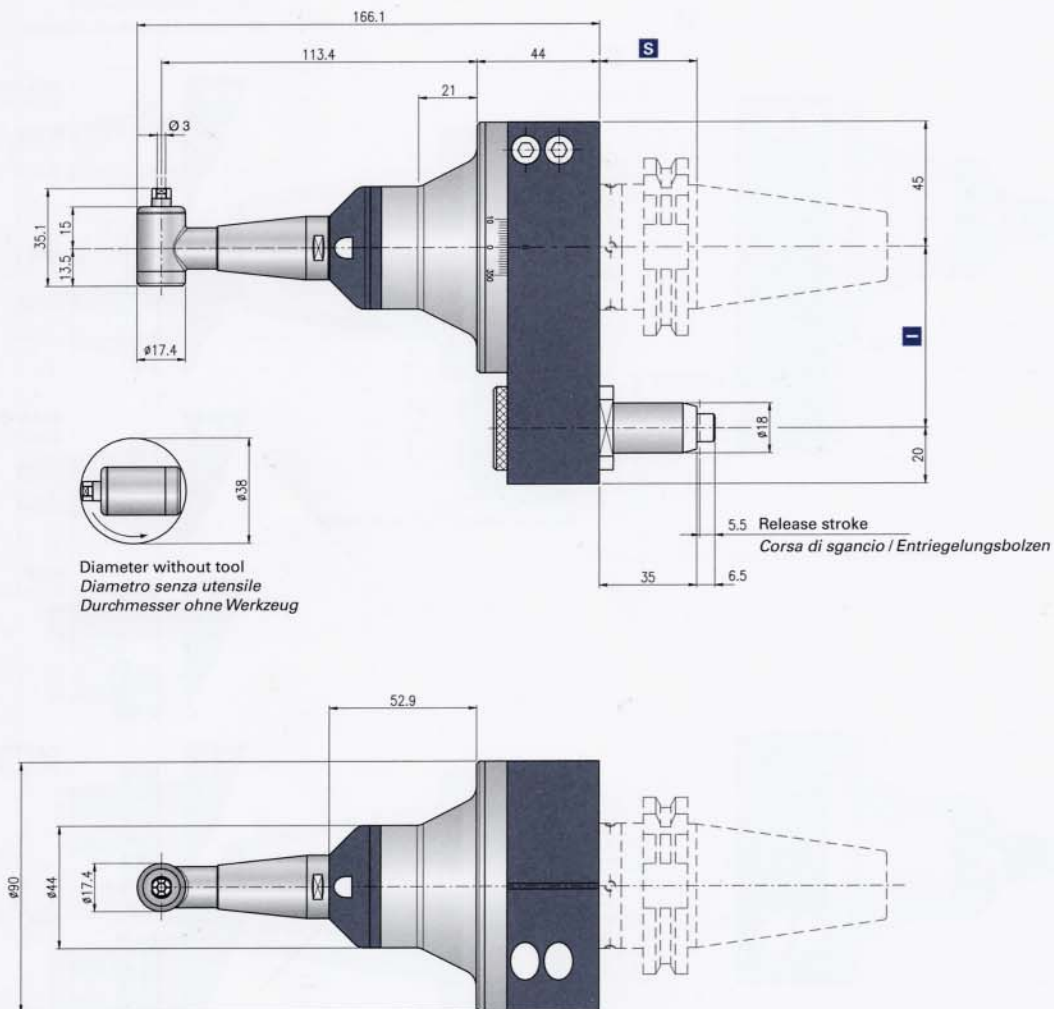


Precision Spindle/Precisione Mandrino/Spindelpräzision



High-speed spindles up to 15.000 min<sup>-1</sup>

## SLIMLINE RA-200



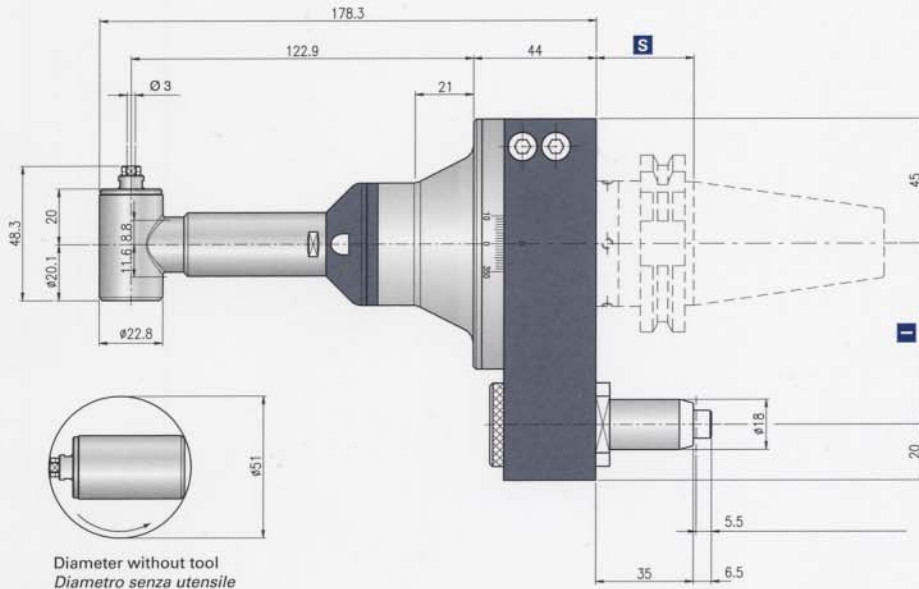
Technical Data / Dati Tecnici / Technische Daten		RA-200	RA-100
RPM max. / Max. velocità / Drehzahl max.	min <sup>-1</sup>	10.000	5.620
Rt reduction / Rt riduzione / Rt Reduktion		1/1,5	1/2,67
Collet / Pinze / Spannzange	mm	CHC Ø3	CHC Ø3
Type Spindle / Manipolo tipo / Spindeltyp		RA-200	RA-100
Rotation / Rotazione / Rotation		right/destra/rechts, left/sinistra/links	right/destra/rechts, left/sinistra/links
Weight / Peso / Gewicht	kg	3,5	3,5

STANDARD EQUIPMENT INCLUDES: NAKANISCHI Kit / Angle head / Collet / Wrenches / Oil tube / Instruction book

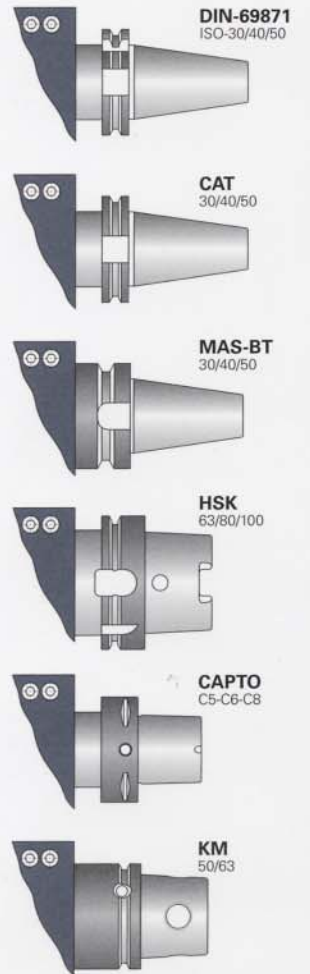
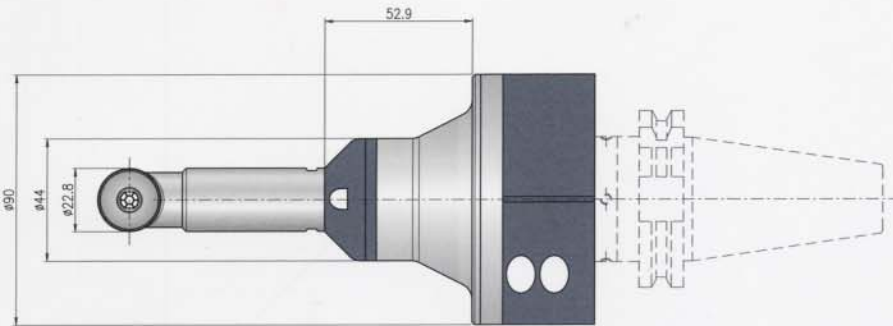


# SLIMLINE RA-100

**Non interchangeable input drive shank**  
*Coni non intercambiabili*  
*Nicht wechselbare Aufnahme*



Diameter without tool  
*Diametro senza utensile*  
*Durchmesser ohne Werkzeug*



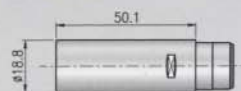
Shank/Cono/Aufnahme	DIN-69871 / CAT			MAS-BT			HSK		CAPTO		KM
Size/Grandezza/Größe	30	40	50	30	40	50	63-80	100	C5-C6	C8	50-63
<b>I</b>	65-80	65-80-(110*)	80-110	65-80	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)	80-110	65-80-(110*)
<b>S</b>	35	35	35	30	35	41	42	45	38	40	40

\*optional

## Accessories / Accessori / Zubehör












	RA-200	RA-100
Collet/Pinze/Spannzange	CHS: ø0,8, ø3 from 0,1 and ø2,35, ø3,175	CH8: ø0,8, ø3 from 0,1 and ø2,35, ø3,175
Air line kit/Filtro regolatore aria/Luftsystem	AL-0304	AL-0304
Retaining block/Tassello di ritegno/Stop block	mm ø18	ø18
Extension/Prolunga/Verlängerung	CN-01	CN-01







**Extension between spindle and head**  
*Prolunga da inserire tra manopolo e mini testa*  
*Verlängerung zwischen Spindel und Fräskopf*



**Precision Spindle/Precisione Mandrino/Spindelpräzision**



TURBOFLEX	58.000 min <sup>-1</sup>	30.000 min <sup>-1</sup>	18.000 min <sup>-1</sup>	Model
NR-601	•			
NR-2351-58	•			
AMH-301		•		
NR-2351		•		
NR-303		•		
RA-200		•		
RA-100		•		
RA-271E			•	
RA-151E			•	
NR-3060S			•	
RAX-271E			•	

SLIMLINE	20.000 min <sup>-1</sup>	15.000 min <sup>-1</sup>	Model
IC-300	•		 *
KC-300	•		 *
MFC-300S		•	 *
MFC-300M		•	 *
RA-200		•	
RA-100		•	

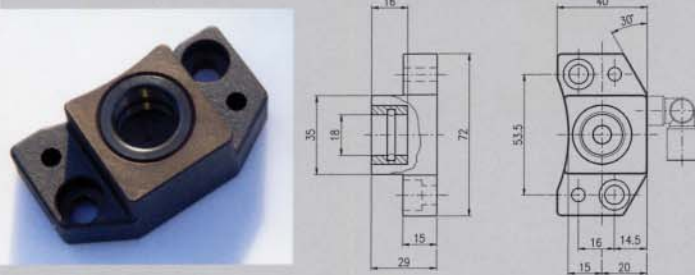
\*For special applications only / solo per applicazioni speciali / nur für Sonderanwendungen

## Accessories / Accessori / Zubehör

Air line kit / Filtra regolatore aria / Luftsystem



Retaining block / Tassello di ritengo / Stop-Block



Air-stop system for Turboflex / Incluso valvola per Turboflex / Druckluft-Stop-Block für Turboflex

Conversion kit type 1 / Kit di conversione tipo 1 / Konversionskit Typ 1



Conversion kit type 2 / Kit di conversione tipo 2 / Konversionskit Typ 2



Overview  
Descrizione/Überblick





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